



Claims Listing 05/06/09

I claim:

1. [ORIGINAL] A system, comprising:
 - a nozzle having an inlet, a throat, and an exhaust;
 - a fluid flowing through the nozzle; and,
 - means for inducing a phase change in the fluid within the nozzle.
2. [ORIGINAL] A system, comprising:
 - a nozzle having an inlet, a throat, and an exhaust;
 - a fluid flowing through the nozzle;
 - means for inducing a phase change in the fluid within the nozzle; and,
 - means for transforming the flow from the exhaust into work outside the system.
3. [ORIGINAL] A system, comprising:
 - a nozzle having an inlet, a throat, and an exhaust;
 - a fluid flowing through the nozzle;
 - means embedded within the nozzle for directly transferring energy into the fluid and inducing a phase change in the fluid; and,
 - means for transforming the flow from the exhaust into work outside the system.
4. [ORIGINAL] A system, comprising:
 - a nozzle having an inlet, a throat, and an exhaust;
 - a fluid flowing through the nozzle;
 - means embedded within the nozzle for transferring energy into and heating the nozzle, thereby indirectly transferring energy into and heating the fluid and inducing a phase change in the fluid; and,
 - means for transforming the flow from the exhaust into work outside the system.
5. [ORIGINAL] A system as in Claim 4, wherein the cross-sectional interior volume of the inlet, throat, and exhaust of the nozzle vary only across one plane perpendicular to the axis of fluid flowing through the nozzle.

6. [ORIGINAL] A system as in Claim 4, further comprising a surfactant having an extra ion dissolved in the fluid.

7. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule.

8. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule having only 5 to 50 atoms.

9. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule having only 5 to 10 atoms.

10. [ORIGINAL] A system as in Claim 6, wherein the fluid includes a lithium salt and the surfactant is non-reactive to the fluid and lithium salt.

11. [CURRENTLY AMENDED] A system as in Claim 10, wherein the nozzle further comprises:

~~a third block of an insulating material separating the first structural core and heat transference block separating the first structural core of the nozzle and means embedded within the nozzle for transferring energy into and heating the nozzle, from the fluid flowing through the nozzle.~~

12. [CURRENTLY AMENDED] A system as in Claim 11, wherein the ~~third insulating and heat transference block~~ further comprises:

a first sub-layer of an electrical insulating material; and,
a second sub-layer of a thermal insulating material.

13. [ORIGINAL] A system as in Claim 11, wherein means embedded within the nozzle for transferring energy into and heating the nozzle, thereby indirectly transferring energy into and heating the fluid and inducing a phase change in the fluid further comprise:

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a structural core formed of a first material;
a heat transference block formed of a second material, said heat transference block having at least one surface over which the fluid flows and from which heat is transferred from the heat transference block to the fluid; and,
means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block.

14. [ORIGINAL] A system as in Claim 13, wherein the fluid includes deuterium.
15. [ORIGINAL] A system as in Claim 13, wherein the second material is a metal alloy whose principal component comes from the following set of materials: palladium, lanthanum, praseodymium, cerium, titanium, zirconium, hafnium, vanadium, niobium, tantalum, nickel, thorium, protactinium, and uranium.
- 16 [ORIGINAL] A system as in Claim 13, wherein the second material is palladium.
17. [ORIGINAL] A system as in Claim 16, wherein the means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block further comprise:
 - an anode; and,
 - means for electrically stimulating the heat transference block by passing a current between the anode and the heat transference block.
18. [ORIGINAL] A system as in Claim 17 wherein the electrical stimulation of the heat transference block varies periodically.
19. [ORIGINAL] A system as in Claim 17, wherein the stimulation of the heat transference block occurs in a periodic pattern of increasing impulses.

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20. [ORIGINAL] A system as in Claim 13, wherein the means for inducing a low-energy nuclear reaction in the heat transference block further comprise at least one laser in the nozzle whose emission is directed against the heat transference block.

21. [ORIGINAL] A system as in Claim 20, wherein the laser is capable of variable emission.

22. [ORIGINAL] A system as in Claim 16, wherein the means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block further comprise:

an anode;

a cathode;

means for electrically stimulating the heat transference block between the anode and cathode; and,

at least one laser whose emission affects the heat transference block.

23. [ORIGINAL] A system as in Claim 21, wherein both the laser, and the means for electrically stimulating between the anode and cathode the heat transference block, are capable of variable output.